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The 1999 Repeal of Glass-Steagall: The Effect on U.S. Commercial Banks

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The 1999 Repeal of Glass-Steagall: The Effect on U.S. Commercial Banks

A Capstone Project Submitted in Partial Fulfillment of the
Requirements of the Renée Crown University Honors Program at
Syracuse University

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Honors Capstone Project in Economics

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Abstract

The Great Recession of 2008-2009 was one of the most devastating financial crises of our history. The extent with which the recession plagued our financial system and affected everyday citizens created an immediate search for answers as to what had happened. Many experts pointed at the 1999 repeal of the Banking Act of 1933 (commonly referred to as Glass-Steagall) as a possible cause of increased risk-taking in the financial system. After the Great Depression, Glass-Steagall was enacted to separate commercial banking from investment banking, the combination being seen as a cause for the worst financial crises in history. With the repeal of this act many argued that with increased international competition and government guarantees on their depositors' money, banks shifted their risk to riskier securitization instruments that would allow them to increase their profits.

With this paper I study the leverage data of U.S. commercial banks and a control group of selected foreign banks to attempt to see if the repeal of Glass-Steagall may have had an effect on bank risk-taking. By using different measures of leverage as outcome variables I was able to analyze the risk-taking shift after the repeal. The study finds little apparent effect of the repeal on bank leverage data, although the results do imply that there are many outside factors affecting the results. Although the study provides a lack of consistent results, its overall meaning can add to the debate on the role of regulation in our financial system.

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I. Introduction

In 1929 our world was struck with the most devastating financial crisis in history. The aptly named Great Depression dramatically impacted the lives of everyone but the most fortunate. The magnitude of this crisis forced people to look for answers to the question of how our financial world could be crippled so suddenly and so drastically. The most extensive congressional investigation, the Gray-Pecora investigation of 1932, found widespread fraud and conflicts of interest in the banking system, stripping it of its credibility. The findings of this investigation and countless hearings and interviews led in 1933 to the passing of the Banking Act of 1933, known more commonly today as the Glass-Steagall Act. This legislation, in effect created a barrier between depository institutions and their ability to deal with securities and the firms that dealt in securities. Although restrictions that were put in place through the Glass-Steagall Act were slightly loosened over the six decades before its repeal, commercial banks still felt the effect of the regulation on their competitiveness and profitability.

With the repeal of Glass-Steagall in 1999 and the ensuing financial crisis starting in 2008, many experts have discussed the role this deregulation of the United States financial system had in the financial environment leading up to the crisis. The debate has focused on the role the repeal had in the financial crisis and how it affected the financial environment leading up to the crisis, although no clear consensus has been reached amongst the experts and policymakers as to how big of an impact this policy change had. The motivation for this study is to examine the effect that the repeal of Glass-Steagall had on United States

commercial banks by looking at the effect it had on commercial bank leverage, a common method of examining the amount of risk firms are taking.

This question is relevant today as evidenced by legislation such as the Volcker Rule, in which we still see a debate amongst our country's policy makers and financial experts on the proper regulation for the financial market. The Volcker Rule, which prohibits proprietary trading by commercial banks, is an attempt to reinstate many Glass-Steagall regulations and recreate the barriers between banks and securities firms this regulation brought about. Proponents of the Volcker Rule argue that policies such as the repeal of Glass-Steagall led to a large increase in risk-taking and that there needs to be regulation in the financial market, while others argue that regulation needs to adapt with the changing financial system in order to ensure its stability.

Many experts have voiced their opinion on the effect the repeal of Glass-Steagall had on the global financial system. However, with the rapidly evolving nature of the global financial system it is difficult to find similar time periods/systems with which to compare that before and after the repeal of Glass-Steagall. Notably, many experts examine the financial system shortly before Glass-Steagall was enacted in 1933 in order to pull some evidence from a system free of the Glass-Steagall regulations. In Kroszner and Rajan (1997), they argue that evidence from the United States banking system prior to Glass-Steagall in 1933 showed that investors actually fared better when investing in securities through commercial banks. They argue, "investors rationally discounted for potential conflicts of interest within commercial banks, which is why such

investors do not appear to have fared worse” (4). However, they also mention the importance of the system of bank competition at the time with almost no deposit insurance or deposit guarantees. This led to a natural system of banking successes and failures, which Kroszner and Rajan claim enables for a better study on this topic. Barth, Nolle and Rice (2000) argue that the moral hazard brought about by deposit insurance and government guarantees on deposits greatly increases the incentives and proclivity for risk taking by depository institutions, so it is important to consider the differences in place prior to Glass-Steagall and after GLBA.

Many experts have also discussed the various roles that leverage, universal banking and regulation have in the financial system, with different arguments. However, this paper attempts to draw from these experts and use their research to lend credibility to the evidence produced by the research I have conducted. Unlike other pieces of literature on similar topics, I attempt to use my data to tell a story about the effect of GLBA on U.S. commercial banks in the hopes to lead to further implications about the effect it may have had on the recent financial crisis.

My approach to this study was to examine leverage and income data acquired from Bloomberg on a sample of 271 U.S. commercial banks and a sample of 41 banks from Germany, Switzerland and the U.K. I chose banks from these three international countries as a control group because of their common use of a system of universal banking in contrast the relations Glass-Steagall place on the U.S. banking system before the repeal in 1999. I proceeded to restrict my data using only those banks whose income exceeded ten million dollars in the initial

year of 1997. I then collapsed this data into sample means and separating it by whether the bank was U.S. or a foreign bank. This allowed me to do a time-series analysis of my data to attempt to visually examine the effect of the repeal. I also analyzed sample means on the leverage data I used, looking at the variables: financial leverage, five-year geometric growth in financial leverage and off-balance commit and contingency. These are varying measures of leverage and I examined them all in the hopes of getting a fuller picture of how GLBA affected the leverage of U.S. commercial banks.

The results of this study proved mixed, although the analysis did provide some useful insight into the affect on the leverage of U.S. commercial banks. The study shows the most significant result in the analysis on off-balance commitments and contingencies, where the data shows a large increase following the repeal of Glass-Steagall among U.S. banks in comparison to the control group. The analysis saw little effect on financial leverage, although 5-year geometric growth in financial leverage increased dramatically for U.S. banks in the years preceding GLBA. I claim that the increase in off-balance commitments and contingencies, which includes high-risk instruments like derivatives, would not be reported in financial leverage, thus possibly biasing the affect of GLBA. I also suggest that banks anticipated the repeal of Glass-Steagall, which was seen as obsolete, and thus had begun to increase leverage levels prior to the passage of GLBA, explaining the increases seen in 5-year geometric growth in financial leverage. Thus, even though the results of this study were mixed, my analysis still concludes that the repeal of Glass-Steagall did lead to an increase in the risk-

taking of banks and an overall increase in leverage. Overall, I discuss the importance of policymakers to consider the shift in financial markets before creating important new policies that affect it.

My study will now proceed with a brief section on the key institutional factors and any background surrounding my topic that will provide the reader with enough knowledge to interpret the model, results and conclusion drawn from my research. I will then go into further detail about the process I went through to acquire my data, and how the variables I am using should be interpreted. I will conclude my study with the results I have seen in the work with my data and a conclusion section that will discuss what the results of this paper could mean in the bigger picture of financial regulation. The conclusion section will also attempt to add to the discussion of the role of the repeal of Glass-Steagall in the Great Recession.

II. Key Institutional Factors/Background

This section will provide some useful insight and background into the history surrounding the Glass-Steagall Act and its repeal and also some of the key factors that this paper focuses on. I will look at studies on the effect of leverage on commercial banks and also examine research on the debate between the structures of financial systems (universal banking vs. more regulation). This will enable the reader to better understand the variables being studied and the results and conclusions that are made from the data.

I have briefly touched already on the history of Glass-Steagall but I will go more in depth into the many factors surrounding the act and the reaction to the act in the years leading up to the repeal. Looking at Table 3 (Appendix A) I have provided a brief timeline surrounding the history of Glass-Steagall. The main points to consider in this table are the policy responses following the passage of Glass-Steagall in 1933. One can see that in 1956, with the passage of the Banking Holding Company Act, Glass-Steagall restrictions were modified to separate commercial banking from the insurance industry as well as investment banking. Also, as talked about before there were slight loosening of the Glass-Steagall regulations before GLBA, seen in 1986 with the amendment to section 20 of the Banking Act. This was the largest loosening of regulation before GLBA and it is important to consider how this loosening of regulation could have an affect on the results of my analysis.

The repeal of Glass-Steagall was lobbied for since the day it passed into law, but the arguments grew more persistent in the 1980's and early 1990's. Those who asked for the repeal claimed that the act decreased the competitiveness of U.S. commercial banks with foreign banks that were given more financial freedom. There were also arguments that repealing Glass-Steagall would decrease the risk for depository institutions, as it would allow them to diversify their investments and the securities activities they were undertaking. As more lobbied for the repeal of Glass-Steagall, equally as many stood their ground with strong arguments on why the act should never be repealed. Many of these, including a plea by Senator Paul Wellstone shortly before GLBA was passed, claimed that

repealing Glass-Steagall would allow for the formation of financial conglomerates with a huge amount of risk placed on their depositors' government guaranteed money. These people feared the formation of the financial corporations later termed "too big to fail" and the negative effects they could have on the world financial system.

Although both sides of the argument have credibility, it is important to understand that many other external factors influenced how banks actually reacted to the repeal of Glass-Steagall. Acharya, Cooley, Richardson and Walter, in their paper "Manufacturing Tail Risk: A Perspective on the Financial Crisis of 2007-2009" talk about the role of deregulation in shifting the risk-taking practices of banks. They argue that although Glass-Steagall was becoming obsolete by the time it was repealed, the deregulation and financial environment of the time led to a large increase in leverage and risk-taking by commercial banks (2009).

It is also important to discuss the role of leverage in the financial system and how it is used as a measure of risk. In layman's terms financial leverage is the amount of a company's assets financed by debt. With government guarantees entering the financial system this means that an increase in leverage in commercial banks means that not only are shareholders and investors having the risk of their investments increase but taxpayers are equally at risk. This is why we saw the Great Recession affect so many people throughout the United States because the government was forced to bailout the large financial institutions that were too big to fail. Barth, Nolle, and Rice claim that "in addition to the volatility of the environment, an increase in bankers' inclinations and incentives to take risk

explains why banking no longer appears to be safe” (2000; p 1-2). The shifts in the financial environment around the time of GLBA, including government guarantees, allowed commercial banks to drastically increase their risk once the regulations that had been restricting them were lifted.

Understanding the role that leverage plays as a measure of risk and how financial deregulation can affect the risk-taking of banks is important for the analysis provided in the rest of this paper. It is an extremely complex topic but to understand it on a basic level and some of the literature on it will allow for a better understanding of the graphs and tables in the following sections.

It is also necessary to have an understanding of banking structure for a stronger analysis between the control group of universal foreign banks and the more tightly regulated U.S. banks. Before GLBA repealed the regulations put in place with Glass-Steagall, the U.S. banking structure was much more tightly regulated and the activities of different sectors of the financial system were for the most part separate. After the repeal, the series of mergers and consolidations that formed the large financial conglomerates that made up much of the financial sector brought the structure of the U.S. banking system much closer to the universal banking system seen in Europe. Arthur E. Wilmarth Jr. in his paper “The Dark Side of Universal Banking” argues that “given the massive losses suffered by universal banks, and the extraordinary governmental assistance they have received, they are clearly the epicenter of the global financial crisis” (2009, p. 963). With the emergence of a more universal banking structure after the repeal of

Glass-Steagall, the government guarantees and the formation of these large financial conglomerates exemplified the financial crisis when it finally hit.

The importance of this difference in banking structure will be seen in the analysis and it will become clear that the emergence of this universal banking structure following the repeal led to the financial system growing at an exponential rate and possibly leading to a much greater financial crisis than would otherwise have happened.

III. Data Description

The data that was used for this analysis was on a sample of 271 U.S. commercial banks and a control group consisting of 41 banks from Germany, Switzerland and the U.K. These international banks served as my control group due to the system of universal banking that they have had in place for decades. The universal banking system, as discussed in the previous section, is a system with little to no regulation and thus serves as a strong control when compared to the U.S. banking system which went from a highly regulated system before GLBA to a much less regulated system after the repeal. This data was acquired from the Bloomberg Data Service and allowed me to screen the banks which I used and also to select various financial variables to collect my data.

I studied three different variables related to the leverage of banks provided through Bloomberg. These were financial leverage, defined as average total assets divided by average total common equity; 5-year geometric growth of financial leverage, a growth rate of financial leverage calculated using a geometric formula;

and off-balance commitments and contingencies, defined as “the notional amount (underlying principal amount) of derivatives such as caps and floors, futures and forwards, currency options, currency swaps, interest rate swaps.

Includes the contract amount of commitments to extend credit (irrevocable undrawn loan facilities), letters of credit, total minimum operating lease payments, pledged assets, and leverage deposit contracts” (Bloomberg). These three different measures give a varying outlook on the risk-taking measures of banks around the time of GLBA. I also analysed the two separate measures included in the formula of financial leverage, average total assets and average total common equity, in order to give a better picture of what was affecting financial leverage.

First looking at Table 1: Descriptive Statistics (Appendix A), we see a brief summary of the data that was worked with in this study. I separated the summary into U.S. banks and the control group of foreign banks. Immediately once can notice that there is a far larger number of observations for U.S. banks but this follows from the idea that the foreign banks in our control group operate under the universal banking system. This inherently entails a smaller number of large financial institutions. The U.S. banking system is also much larger and there are just a much larger number of U.S. banks than most other countries in the world.

Looking at some of the descriptive statistics we see that for both financial leverage and off-balance commitments and contingencies, the data for our control group tends to be much larger than that for U.S. banks. For example the sample

mean of financial leverage for U.S. banks is 11.55928, whereas the sample mean for the same variable for foreign banks is 23.73899. This also follows from the fact that our control group is supposed to represent the universal banking system, which allows for the formation of large financial institutions that generally are able to invest in high-risk investment instruments.

IV. Results

I started my analysis with the most basic measure of leverage used, financial leverage. Looking at Graph 2 (Appendix A) there is a graph of the sample means of the financial leverage collected on U.S. and Foreign banks relative to the 2000 levels. The horizontal axis represents the year for which the data was reported and the vertical axis represents the sample mean value for financial leverage calculated as a fraction relative to 2000 levels. U.S. banks are represented by the red dotted line whereas foreign banks are represented with the blue dotted line.

Interestingly, we see very little change in financial leverage in both U.S. banks and our control group of foreign banks. This comes as a surprise because as talked about in the previous section, deregulation in a financial environment like the one around the time of GLBA would be expected to cause an increase in leverage. However, digging a little deeper into this variable we have Graphs 2(a) and 2(b) which represent the two aspects of the formula that calculates financial leverage; average total assets and average total common equity both relative to their respective 2000 levels. Examining both of these graphs shows a fairly steady

increase in both the numerator and denominator, which would explain the lack of an overall increase in the financial leverage variable. Interpreting these two variables we see that in the period following GLBA and leading up to the Great Recession of 2007-2009 banks were rapidly increasing their assets and the market was in turn increasing the value of these banks. We will discuss this further when we examine the next two variables as both of them provide possible explanations for the surprising result seen in financial leverage.

The analysis then moves onto the 5-year geometric growth in financial leverage, a growth rate of the variable just discussed calculated using a geometric formula. Looking at Graph 1 (Appendix A) we once again are faced with an extremely interesting result. We actually see this variable start to rapidly increase in U.S. banks a few years before GLBA. This seems to say that leverage of banks was increasing before the repeal of Glass-Steagall ever happened. As discussed in previous sections, there were slight loosening of the Glass-Steagall restrictions before GLBA and that Glass-Steagall was becoming increasingly obsolete before the repeal. A possible explanation of the surprising result with this variable is that as Glass-Steagall was increasingly loosened and the repeal of the act seemed imminent, banks anticipated this by increasing their leverage earlier. Also, the large series of bank mergers and acquisitions that formed many of the large financial conglomerates began a year or two before GLBA, which may have led to these newly formed institutions to begin increasing their leverage levels along with the anticipation of the seemingly inevitable repeal of Glass-Steagall.

Looking at Table 1 we can see that U.S. banks 5-year geometric growth in financial leverage increased from -6.896 in 1997 to -4.083 in 1998 and -0.693 in 1999, the three years of data we have before the repeal. This is compared to an extremely little change in the growth rate of the control group from 1.197 in 1997 to 1.380 in 1998 and 0.681. It is interesting to observe that the control group of universal foreign banks starts with positive 5-year financial growth, whereas U.S. banks start extremely negative. This could signal the affect that the Glass-Steagall regulations had on the leverage and risk-taking capabilities of banks before the repeal. As U.S. banks began to see regulations loosen they were able to start increasing their leverage from minimal levels to those similar to the levels seen in the universal banking system of the control group.

The final variable included in the analysis was off-balance commitments and contingency, also measured as relative to 2000 levels. Examining Graph 3 (Appendix A) we notice the first actual apparent affect of GLBA on U.S. commercial banks, especially in comparison to the control group. In the year or two following the repeal (2000-2002) we see the notional amount of derivatives for U.S. banks increase substantially more than for the foreign banks. This is an interesting observation, especially compared to the previous two variables which showed inconsistent results. This result shows that after commercial banks were allowed to undertake investment banking activities the volume of derivatives and commitments to extend credit, two high-risk instruments, increased in comparison to the universal banking system of the control group. Allowed this new freedom

in the financial system, U.S. commercial banks increased the risk that they were taking with their depositors' money.

Again looking at Table 1, we can notice the difference in the control group and the group of U.S. banks. In 1999, U.S. banks had a value of 0.777 compared to the control group's value of 0.544. We then see a jump almost double that of the control group when in 2001 the value for U.S. banks shoots up to 2.249 compared to an increase to only 1.117 for the control group. This significant result in this variable can also be used to attempt to explain some of the inconsistencies in the results analyzed for the previous variables. With financial leverage we saw little change in the variable and saw both average total assets and average total common equity increase at a similar rate over the time period leading to the Great Recession. However, the large increase in derivatives and other similar instruments could possibly have not been fully reported as the banks assets. This could mean that these banks were taking on an increasing amount of risk that was not reported in their assets and thus did not result in any apparent penalty in their stock prices. Thus, the financial leverage variable that we are interpreting may be biased due to this.

The overall results from the analysis were clearly mixed and affected by a variety of factors influencing the financial system around this time period. While we saw little affect on financial leverage, we saw a significant affect on off-balance commitments and contingencies possibly signaling that the actual affect on financial leverage is not shown clearly by the data I studied. We also saw a surprising increasing in 5-year geometric growth in financial leverage

before GLBA was passed in 1999. I guessed that this may have been an anticipatory move by banks with the repeal of Glass-Steagall seeming inevitable.

Observed individually it is hard to draw any hard conclusions from any one of these variables but observing them all together allows at least somewhat of a story to tell about the effect of the repeal of Glass-Steagall. Although some of the pieces that I put together in my analysis are just presumptions or guesses, they provide at least an attempt to explain the results seen in the data.

V. Policy Implications

In order to really conclude one way or another on the effect that the repeal of Glass-Steagall had on the leverage of U.S. commercial banks this study would have had to produce some more consistent results. However, it seems entirely plausible that if more work were to be done to uncover more of the story hidden in the data we would see that the repeal of Glass-Steagall did lead to an increase in risk-taking in commercial banks and also increased the damage done during the Great Recession. It is important to note that the role of regulation in the financial system is still not entirely made clear, although this study showed that the deregulation that occurred in the late 1990s did not consider the ways in which the financial system was shifting. Although Glass-Steagall was considered obsolete by many by this time that did not mean that some other regulation or policy would not have been beneficial to the financial system.

It is hard to take seriously the bankers and lobbyists who lobbied for the repeal of Glass-Steagall. Although they presented valid and credible arguments as

to how the repeal could actually benefit the financial system it became increasingly evident that this was not the true reason that the repeal was wanted. Banks wanted to maintain competitiveness with their international counterparts, forcing them to take risky decisions, knowing that these decisions were guaranteed by the government and not their investors or shareholders. The policymakers of our country must consider the ways in which a changing financial system could affect the mindset of those involved in it. Acharya claims that “this is not to argue that the Banking Act of the 1930s should necessarily have remained in place, only that whatever replaced them should have been mindful of the market failures that led to their passage in the first place” (2009, p. 259). This becomes even more relevant now, when policymakers are attempting to fix the apparently broken financial system that resulted in the worst financial crisis since the Great Depression.

One has to only look at the new set of regulation being introduced into our financial system, highlighted by the Volcker Rule, to see how policymakers struggle to keep up with the shifts in the market. Whitehead argues that “the Volcker Rule, consequently, fails to reflect an important shift in the financial markets, arguing, at least initially, for a narrow definition of proprietary trading and a more fluid approach to implementing the Rule” (2011, p. 39). The inability of policymakers to implement effective regulations that keep up with the shifts of the financial system will result in more financial crises in the future, hopefully none of them as destructive as the Great Recession or the Great Depression which forced the passage of Glass-Steagall to begin with.

VI. Conclusion

The results of this study definitely will help to further the debate about the role of regulation in financial crises and the role that the repeal of Glass-Steagall had in the Great Recession of 2007-2008. Although our results were mixed they still showed that the period of deregulation surrounding the repeal of Glass-Steagall led to an increase in the risk-taking of banks in the United States, as well as an overall increase in the risk-taking throughout the global financial system. Unless policymakers take the time to really understand the ways in which the financial system is shifting they will not be able to effectively control the members of this system.

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Appendix A: Tables and Graphs

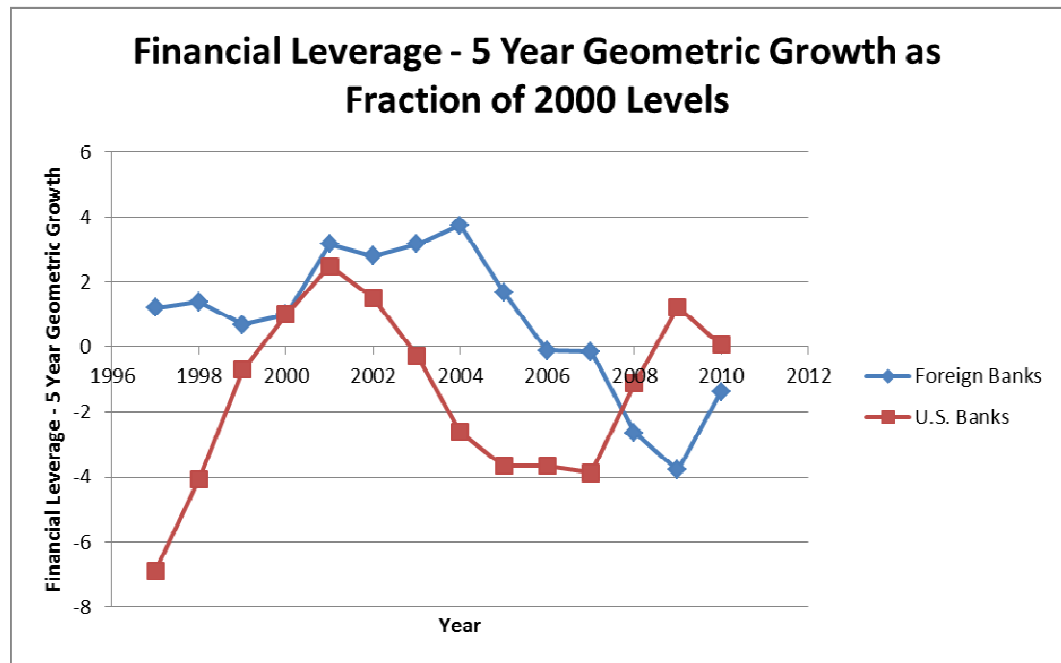
Table 1: Descriptive Statistics				
Statistic	U.S. Banks			
	Financial Leverage	5-Year Geometric Growth	Off-Balance Commitments and Contingencies	
Sample Mean	11.55928	0.417422	10119.44	
Standard Deviation	6.097354	5.306029	164508.2	
Observations	2831	2183	2767	
Statistic	Foreign Banks			
	Financial Leverage	5-Year Geometric Growth	Off-Balance Commitments and Contingencies	
Sample Mean	23.73899	-0.7463769	1349592	
Standard Deviation	13.32391	7.477619	7916855	
Observations	481	412	484	

Table 2: Sample Means Relative to 2000 Levels						
Obs:	Financial Leverage		5yr Geo Growth:		Off Balance Commit & Contingency	
	U.S. (2831)	Foreign (481)	U.S. (2183)	Foreign (412)	U.S. (2767)	Foreign (484)
1997	0.9316	1.0968	-6.8960	1.1970	0.1074	0.5147
1998	0.9335	1.0569	-4.0827	1.3802	1.0282	0.5420
1999	0.9724	1.0395	-0.6933	0.6808	0.7771	0.5449
2000	1	1	1	1	1	1
2001	0.9890	0.9393	2.4774	3.1654	2.2493	1.1171
2002	0.9530	0.9495	1.5180	2.7997	2.3099	1.2302
2003	0.9154	0.9020	-0.2693	3.1687	2.1112	1.8609
2004	0.9120	0.8721	-2.6114	3.7423	2.4936	1.9089
2005	0.9152	0.9396	-3.6418	1.6837	2.9641	3.8950
2006	0.9006	0.9800	-3.6505	-0.1104	3.4900	5.8902
2007	0.8684	1.0069	-3.8583	-0.1424	4.1326	10.7431
2008	0.8957	1.0929	-1.1212	-2.6396	13.2849	5.0921
2009	0.9485	1.0885	1.2198	-3.7759	10.7130	5.0750
2010	0.9591	0.9961	0.0676	-1.3724	9.2131	6.3209

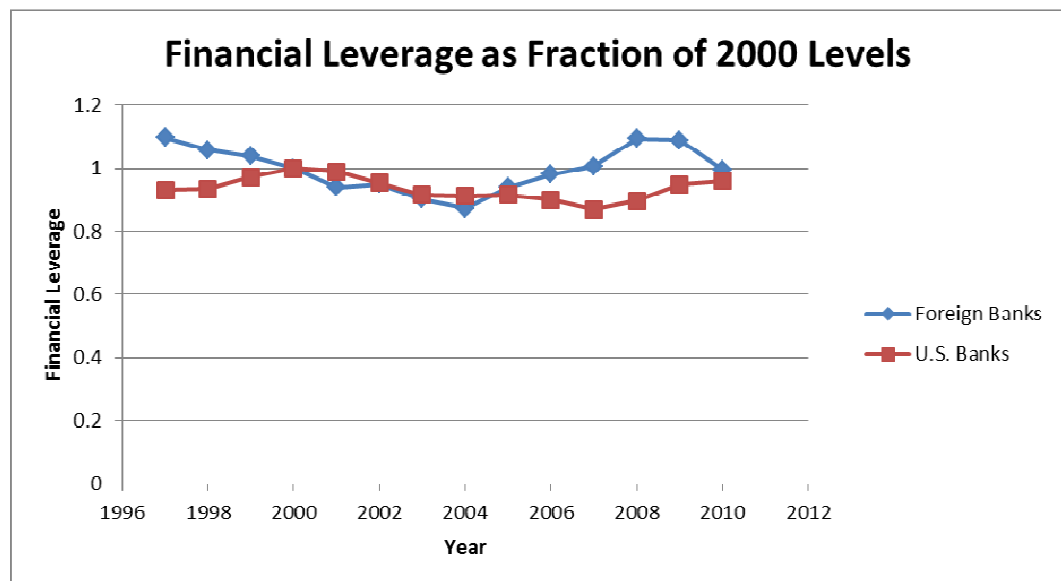
Table 3: Sample Means						
Obs:	Financial Leverage		5yr Geo Growth: Financial Leverage		Off Balance Commit & Contingency	
	U.S. (2831)	Foreign (481)	U.S. (2183)	Foreign (412)	U.S. (2767)	Foreign (484)
1997	11.2784	27.2096	-2.9281	-1.0463	925.0344	286695.83
1998	11.3004	26.2193	-1.7336	-1.2064	8851.5093	301911.26
1999	11.7723	25.7868	-0.2944	-0.5951	6690.3675	303535.84
2000	12.1060	24.8079	0.4246	-0.8741	8609.0419	557024.74
2001	11.9731	23.3024	1.0519	-2.7667	19363.889	622232.14
2002	11.5367	23.5543	0.6445	-2.4471	19886.132	685267.95
2003	11.0823	22.3773	-0.1143	-2.7697	18175.365	1036559.1
2004	11.0410	21.6342	-1.1088	-3.2710	21467.41	1063314.9
2005	11.0805	23.3099	-1.5463	-1.4717	25517.844	2169588.8
2006	10.9022	24.3121	-1.5500	0.0965	30045.494	3280968.2
2007	10.5126	24.9789	-1.6383	0.1245	35578.026	5984194.7
2008	10.8439	27.1124	-0.4761	2.3072	114370.44	2836401.4
2009	11.4831	27.0033	0.5180	3.3004	92228.82	2826885.4
2010	11.6113	24.7113	0.0287	1.1995	79315.935	3520873.8

Table 4: Brief Timeline of Financial Regulation and Deregulation in the United States	
Year	Major Event or Policy
1932	<i>Gray-Pecora Investigation</i> found corruption and fraud within investment firms and commercial banks before The Great Depression
1933	<i>Banking Act of 1933</i> with Glass-Steagall provisions dealt mainly with separating commercial and investment banking
1956	<i>The Bank Holding Company Act</i> separated commercial banking from the insurance industry
1986	Amendment to Section 20 allowing all bank holding companies (BHCs) to underwrite up to 10% of revenue in previously ineligible securities
1999	<i>Gramm-Leach-Bliley Act</i> in effect repeals Glass-Steagall allowing commercial banks to undertake investment banking activities

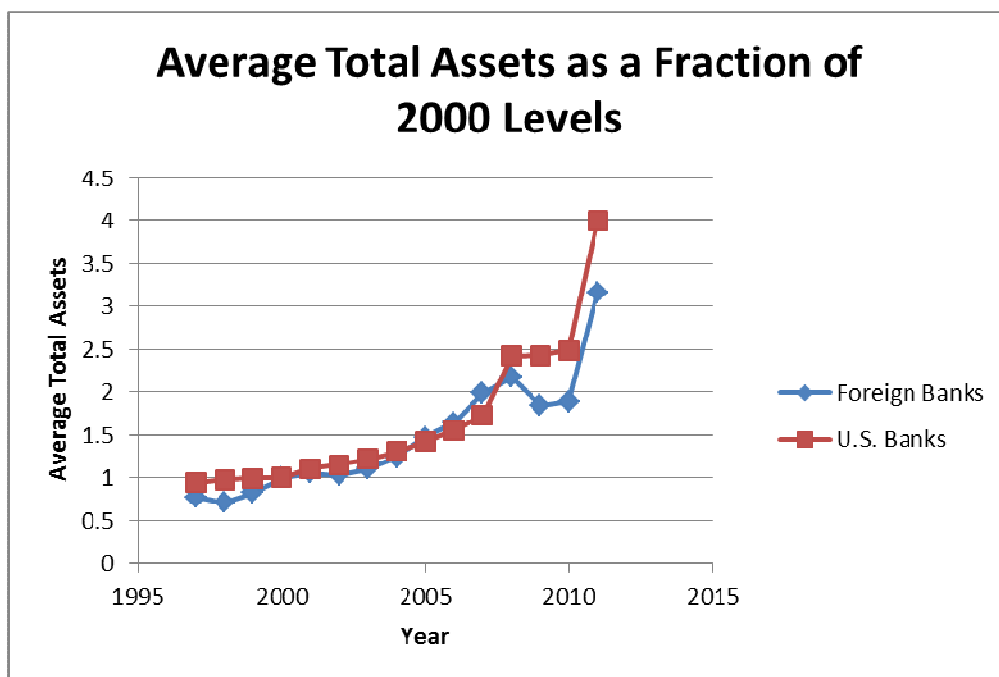
Graph 1



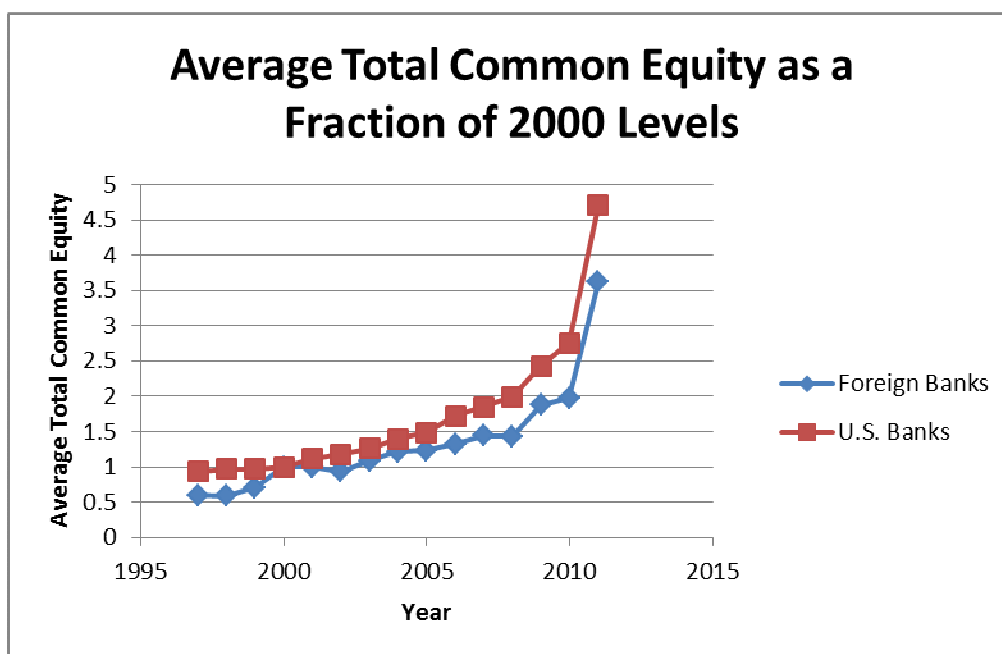
Graph 2



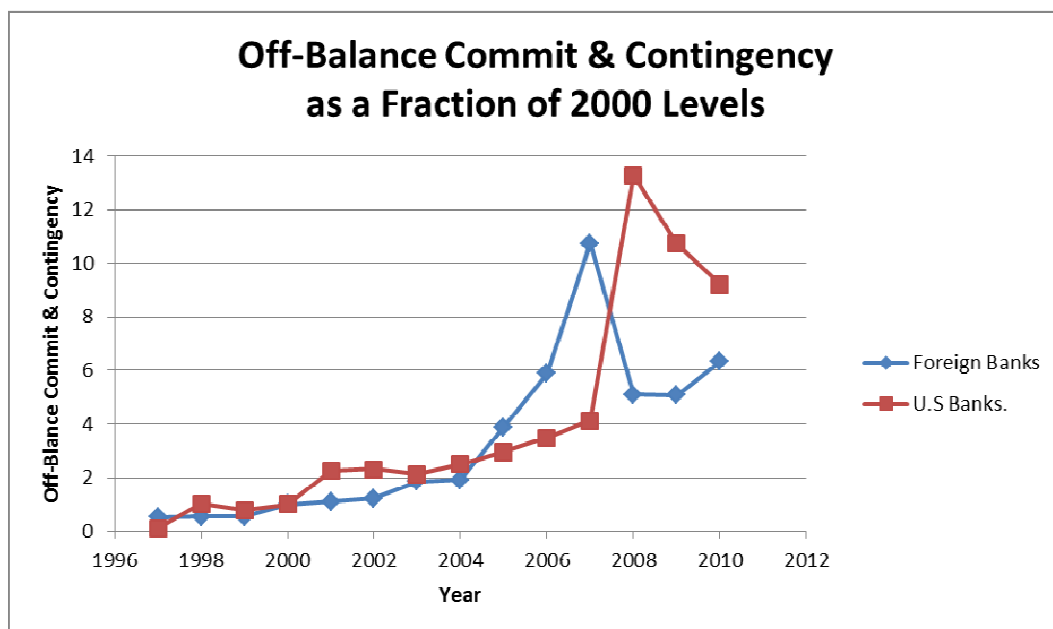
Graph 2(a)



Graph 2(b)



Graph 3



Summary of Capstone Project

I completed my Honors Capstone through the Economics of Distinction Program, which is an econometrics based research project. Econometrics is the study of statistical economics and is conducted by analyzing data to make further economic implications. I chose to complete my project on the 1999 repeal of the Banking Act of 1933 (Glass-Steagall) and its effect on U.S. commercial banks in an attempt to investigate the effect of this financial deregulation on the Great Recession of 2007-2009.

The Banking Act of 1933 was enacted immediately following the Great Depression, the worst global financial crisis in history. After this crisis a number of Congressional investigations were carried out to try and pinpoint the cause of

the depression. These investigations culminated in the Grey-Pecora investigation of 1932 which found widespread fraud and conflicts of interest within the financial industry and placed the blame of this on commercial banks being connected to the securitization industry. Many believed that commercial banks being able to make investments with their depositors' money led to huge conflicts in the financial system and ultimately brought down the industry. This ultimately led to the passage of the Banking Act of 1933, more commonly known as the Glass-Steagall Act after the two senators responsible for the bill. Glass-Steagall made it illegal for depository institutions to undertake any investment banking activities in an attempt to reduce the chances of another Great Depression.

However, as the time since the passage of Glass-Steagall grew larger, more and more policymakers and people within the banking industry began to feel that the Glass-Steagall regulations were becoming obsolete and hampering their international competitiveness and profitability. Many lobbied strongly to have these regulations eliminated and policymakers slightly loosened them in the 1980s and early 1990s. Glass-Steagall did not get fully repealed until 1999 with the passage of The Financial Services Modernization Act of 1999 (more commonly known as the Gramm-Leach-Bliley Act).

Many experts had voiced strong opinions on why Glass-Steagall should or should not be repealed. Famously, Senator Paul Wellstone made an impassioned plea on the Senate floor shortly before GLBA was passed claiming that repealing the Glass-Steagall regulations would lead to the formation of large financial conglomerates that would be "too big to fail." This is a phrase those of us who

have lived through the recent recession are all too familiar with and is a reason why the repeal of Glass-Steagall is debated so often as a possible cause or amplifier of the Great Recession, so aptly named after its predecessor.

There were also many credible arguments as to why the seemingly obsolete Glass-Steagall should be repealed. These focused on the decreasing competitiveness of U.S. banks in an increasingly global arena and also argued that the repeal would decrease the risk of banks by allowing them to diversify their investments. In an ideal financial system these arguments should be true, which is why so many wondered if the repeal decreased the magnitude of the Great Recession or if animal spirits eliminated the validity of these arguments.

I chose to analyze data on U.S. commercial banks, collected through the Bloomberg database, to see what, if any, effect the repeal of Glass-Steagall had on commercial banks and their risk-taking leading up to the Great-Recession. I used a control group consisting of banks from the U.K., Germany and Switzerland, all countries whose banking system operates under a structure of universal banking, a structure with extremely little regulation. I felt that this group would serve as a strong comparison against U.S. banks that went from a heavily regulated system under Glass-Steagall to a system much closer to universal banking after the repeal.

I completed my analysis by looking at three different variables that all constituted a measurement of leverage in banks. In its most simple terms leverage is the amount of a firm's assets that are financed by debt. Leverage is typically used as a measure of risk and this is why I decided to study these variables in

order to see the effect of the repeal on the risk-taking decisions of banks. My overall analysis consisted of a time-series analysis looking at the trends of these variables from 1997 to 2011. This gave a good picture as to the risk banks were taking before and after the repeal in order to better see the effects this policy had.

The results of my study were mixed due to the complex nature of these variables and how they are reported but I was still able to conclude that the repeal did increase the risk U.S. banks were taking in the years leading up to the Great Recession. Although many other factors could have played an important part in why risk was increased during this time period, the results of my study show that GLBA did play a part in this. I would not say that the results of my study should lead to blame of the recession being placed solely on the repeal of Glass-Steagall but I think it is significant in adding to the debate on the role regulation plays in financial crises and how it affects the financial system as a whole.

I think my study is significant because it shows the effect deregulation, such as the repeal of Glass-Steagall, on our financial system and the crises it can precipitate. However, I also argue in my concluding remarks that proper regulation or deregulation is still a heavily debated topic and is one that is constantly changing with the fast moving financial system. It is important for regulators in the future to consider recent changes in the financial system, as opposed to the past, when deciding on future regulations. Without properly considering the ways in which the market has shifted and how new policies could react to this will make future regulation ineffective and bring about more crises, possibly worse than the one our world just went through. This study has provided

another important opinion on this topic and provides some substantial evidence to back this claim.